

JEY Labs Presents



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Please put your name and call on your card and fold it.

We are going to have a seminar class

I would like to know the following from each of you

1. What band or bands are you interested in?
2. What equipment do you have on hand
3. How far have you progressed in getting on the air
4. Next steps for you?

Guiding principles

- Work with a “buddy”
- Find an Elmer
- See what gear you can borrow or buy cheaply
- Don't make the perfect radio-
- Get on the air and then improve it.
- Measure everything and label it.



Two most popular bands

- 144MHz
 - Lots of inexpensive equipment
 - Lots of People to work
 - Not as technically demanding
- 1296MHz
 - Second most popular band
 - Technically challenging
 - Equipment is more expensive

Typical 144MHz Station

- 2 meter multimode Transceiver CAT controlled
- Mirage 180w Amp with preamp
- 2 x 7 or 11 element Yagis



2m
Xcvers



180w Amp
Preamp

2 antennas
7 or 11 elements

Use LMR 400 or Heliax
Make or buy a splitter

Main Wiring Considerations

- Coax
 - Use LMR 400 or Andrews Heliax
 - Get a prep tool.
 - Measure each run for loss and label it
- Sequencer
 - If you are running digital modes, you won't need one.
- DC
 - Pay attention to wire sizes for DC and use power poles
 - Think about weatherproofing and an RF transparent cover.

Typical 1296MHz Station

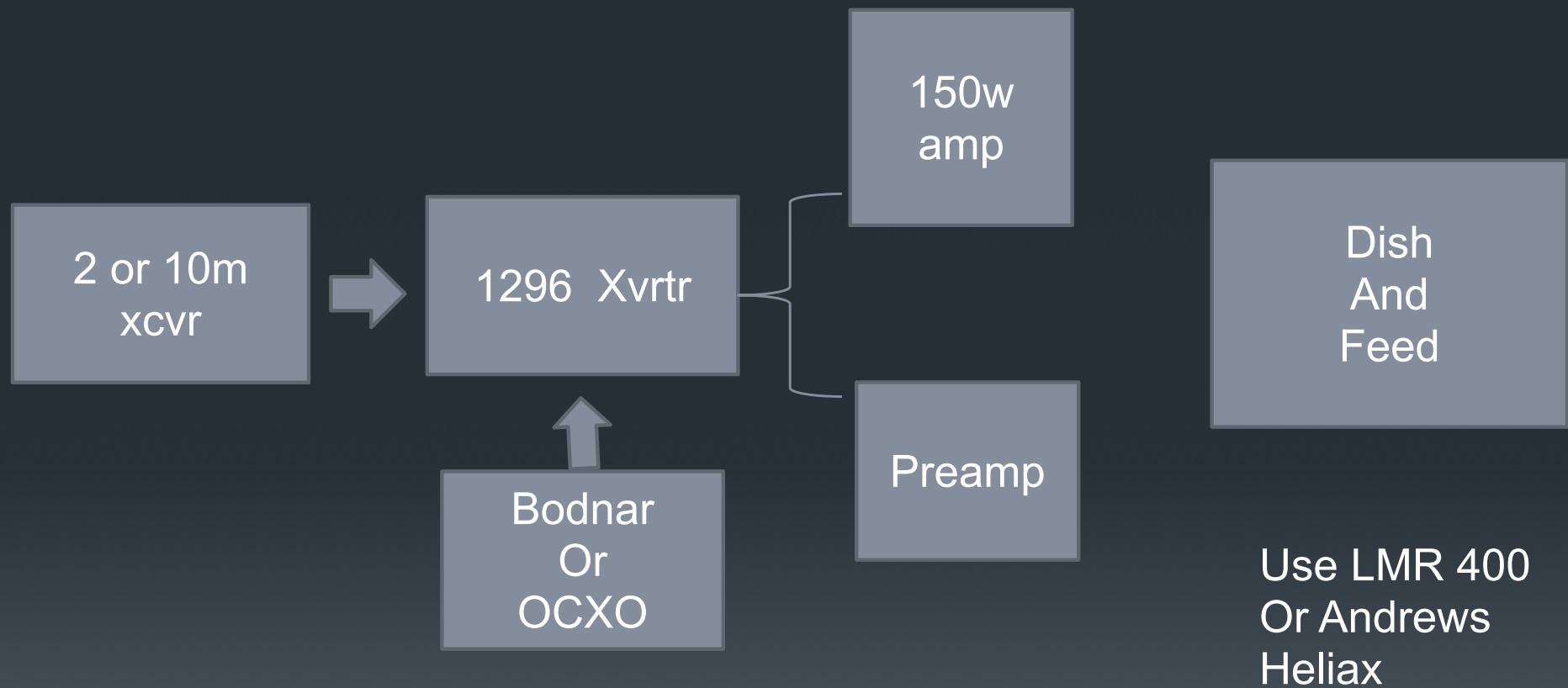
- Transceiver

- IC9700 plus Bodnar GPS Source
- 1296 to 144MHz transverter
 - 10m Transceiver
 - 144MHz Transceiver

Preamp- G4DDK- AGO

Amplifier 150w

W2HRO Dish- use a relay and dummy load on receive (SMA)



Small Details

- Use power poles to keep away shorts
- Label cables and measure coax loss
- Dress and color code wires
- Use a clamp on ammeter to check circuits
- Have an RF output Monitor
- (1296MHz) Have an LED to show that the RX preamp is getting power and relay is switching
- Put the amp and preamp at the antenna.



If you are going portable

144MHz Ideas







1296MHz Ideas

For pointing-

Use an azimuth scale
and a inclinometer or
theodolite program on your phone

The sun moves 1 deg in 4min so reposition
every 8-10 minutes

Hang a counterweight from the middle of the
tripod.

DO NOT LEAVE THE DISH OUT IN THE WEATHER

You can use the Geocam app for pointing



Sampson Tripod head and AZ indicator



A much more complex project. Storage is also a consideration.





Remember to have fun.

Rein, me John and Bill

